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# Cotton Fiber and Processing Test Results

CROP of

1978



Agricultural Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38122 January 12, 1979

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.<sup>1/</sup> These reports are available on request from the Standards Section, Cotton Division, Agricultural Marketing Service, U.S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN. 38122.

<sup>1/</sup> Summary of Cotton Fiber and Processing Test Results, Crop of 1977, USDA, AMS, Cotton Division, August 1978.



## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1978

### Discussion of Test Results

Cottons tested from the Southwest through January 5 in the short staple range are shorter and less uniform than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Cottons are finer and stronger at zero gage strength tests. Both Shirley Analyzer and picker and card waste are higher than last season at this stage of the harvest. Yarns spun from these samples are weaker but have higher appearance grades. Imperfections are lower. The spinning potential yarn number is lower.

Medium staple samples tested from the Southeast are longer, finer and stronger than a year ago. Shirley Analyzer nonlint content is higher while picker and card waste is slightly lower. Yarns spun from these samples show skein strength to be higher. Yarn imperfections are lower. The spinning potential is higher.

South Central medium staple samples tested show fibers to be shorter and stronger at zero gage than a year ago. Picker and card waste is higher. Yarns spun from these samples are weaker but show a lower imperfection count. The spinning potential is lower.

Medium staple samples tested from the Southwest are considerably shorter, less uniform, coarser and stronger than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are slightly weaker and have lower appearance grades. Yarn imperfections are lower. The spinning potential is lower.

Medium staple samples tested from the West to date show cotton fibers to be longer, less uniform and slightly coarser than a year ago. Both Shirley Analyzer and picker and card waste are higher. Yarns spun from these samples show approximately the same yarn quality characteristics as a year ago.

Average results for all medium staple samples tested show fibers to be less uniform and stronger than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples show slightly lower appearance grades. Yarn imperfections are lower. The average spinning potential yarn number is lower.

No long staple lots were received from the Southeast or South Central areas during this period.

Long staple samples tested from the West are shorter, less uniform, finer and weaker than a year ago. Picker and card waste is higher. Carded yarns spun from these samples are weaker. The spinning potential is lower.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States  
through January 5, 1979

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Significant difference

2/

0.02

2

0.2

2

1

0.5

0.5

4(22s)

5

2

3

1/

Based on a limited number of samples of modal quality

Minimum differences considered to be significant for comparisons in this table.

Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

2/

3/

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 5, 1979 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results											
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality					22s Carded & Combed Yarn				
		Span	Unif		Zero gage	1/8" gage				Strength carded	Appearance		Imprfctns card	comb					
											combed	carded		No.	No.				
											No.	In.		Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.
Long Staple Southeast	12	1.13	45	48	88	23	3.5	7.1	-	3/ -	99	-	102	-	18	-	58		
	15	1.12	44	44	85	24	3.4	7.7	16.6	111	128	106	126	12	3	59			
South Central	3	1.16	45	45	92	24	4.3	7.2	-	106	-	97	-	24	-	63			
	3	1.18	43	42	91	26	4.3	8.7	17.4	110	133	93	123	22	6	66			
West	9	1.18	46	40	92	27	3.5	6.2	-	130	-	89	-	27	-	93			
	4	1.14	44	39	89	25	3.5	8.3	17.5	117	138	90	42	28	10	74			
ARRAY																			
AMERICAN PIMA																			
Extra Long Staple: West	3/ -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	9	1.50	33	38	103	35	3.1	7.6	15.1	65	-	114	-	1	-	-	-		
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5	4(22s)	5	5	2	2	2	3			
										4(22s)	5	5	2	2	2	3			

1/ Based on a limited number of samples of modal quality  
2/ Minimum differences considered to be significant for comparisons in this table.  
3/ Data not available except in the summary.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification &				Fiber Test Results										Processing Test Results - Carded Yarns																
No	Grade	Sample Number	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potent'ial							
				32s	In		Pet	Rdg		Mpsi	Zero Gage	1/8" Gage	Pet		G/tex	Pet	No	Gra	Yel	Pet	Lbs	22sor 74 tx		8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	No	No
SOUTHWEST AREA																														
NORTHWEST TEXAS																														
KRESS																														
1	SLM	41	32	1.01	42	32	84	22	6.7	3.4	2	3	3	6.2	80 PERCENT	280	94	7.2	6.6	120	100	28 (22)	10 (0)	43						
2	SLM LT SP	42	32	0.98	45	38	89	22	5.9	3.1	3	4	4	7.4	75 PERCENT	290	96	7.0	6.8	130	110	30 (8)	11 (6)	44						
LAMESA																														
2	SLM LT SP	42	30	0.91	42	36	88	22	7.2	4.3	2	4	4	7.6	75 PERCENT	270	88	7.3	6.5	130	110	29 (14)	10 (2)	33						
LORENZO																														
3	SLM LT SP	42	32	1.00	42	36	87	22	6.3	3.7	3	3	3	6.1	70 PERCENT	279	93	7.0	6.1	130	110	24 (10)	9 (0)	44						
PADUCAH																														
1	SLM LT SP	42 <sup>2/</sup>	31	1.98	44	46	82	21	7.0	4.2	2	4	4	7.2	75 PERCENT	286	93	7.5	6.6	130	110	24 (18)	12 (2)	44						
PLAINS																														
1	SLM	41	33	1.03	43	30	84	23	7.9	5.3	1	3	3	8.0	70 PERCENT	298	101	8.7	7.5	120	120	33 (6)	12 (2)	53						
PLAINVIEW																														
2	SLM LT SP	42 <sup>3/</sup>	32	0.97	45	35	83	22	6.7	4.9	3	3	3	8.4	75 PERCENT	292	95	7.8	6.8	130	110	42 (4)	13 (0)	44						
POST																														
2	SLM LT SP	42	31	0.96	44	42	89	24	7.0	4.0	3	3	3	6.8	80 PERCENT	297	96	7.5	6.5	120	120	23 (4)	8 (0)	44						
SUDAN																														
3	SLM LT SP	42	32	0.98	44	37	87	23	6.6	3.6	3	3	3	7.6	80 PERCENT	293	98	7.2	6.5	130	120	26 (18)	10 (0)	44						
TCKIO																														
1	LM	51	33	0.96	44	33	83	24	7.8	5.5	3	3	3	8.8	80 PERCENT	303	98	7.9	7.0	130	130	30 (8)	10 (4)	53						
TULIA																														
1	LM LT SP	52	31	0.92	45	41	89	23	6.8	5.5	3	3	3	9.5	75 PERCENT	279	91	7.3	6.3	130	120	31 (10)	11 (0)	44						

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

2/ Reduced from 32 because of bark.

3/ Reduced from 42 because of bark.



Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
Grade		Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint		Color Raw Stock		P & C		Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potential
				2.5% span	Unif		Zero Gage	1/8" Gage		Gra	Yel	Waste	8s or 74 tx	22sor 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22sor 27 tx	No	No	No	No		
No	Name & Code			In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	No	No
WINGATE																								
1	SLM	41	33	1.04	42	38	83	21	7.2	4.1	2	2	7.1	289	92	7.9	7.2	130	110	27 (14)	10 (6)	1/ 51		
OKLAHOMA																								
GREENFIELD																								
1	SLM LT SP	42	33	1.02	43	42	90	25	6.6	6.1	3	4	8.0	322	102	7.4	6.4	130	120	30 (14)	12 (0)	49		
MANGUM																								
LANKART 57																								
1	SLM PLUS	40	32	1.00	45	46	84	22	7.0	3.8	2	3	5.7	288	93	7.5	6.3	130	120	25 (16)	8 (0)	47		
2	MID LT SP	32	32	C.98	44	43	82	21	6.9	3.2	2	4	7.2	290	93	7.4	6.4	110	110	25 (18)	11 (0)	42		
TEMPLE																								
LANKART 611																								
2	SLM	41	32	0.99	46	43	89	23	7.0	4.0	3	3	7.7	279	95	7.4	6.4	130	120	24 (4)	6 (2)	46		

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3-Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potent'ial	
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		
				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	
SOUTHWEST AREA																							
NORTHWEST TEXAS																							
BIG SPRING																							
1	LM	LT SP	52	31	0.92	44	43	92	22	6.4	6.9	4	4	10.5	86	25	5.4	4.0	110	70	19	1/ (56) 14 (242) 33	
WEST AREA																							
ARIZONA																							
BUCKEYE																							
3	SLM		41	35	1.09	43	50	87	24	6.6	2.8	1	1	6.3	101	33	6.4	4.5	80	20	(50) 12 (336) 54		
MARANA																							
3	LM		51	35	1.12	42	38	86	21	5.9	4.5	2	2	6.9	93	60	6.0	4.2	80	60	19	(56) 18 (430) 48	
PEORIA																							
3	SLM		41	35	1.11	44	43	86	23	7.0	2.7	1	2	5.8	101	35	6.4	5.2	100	70	19	(74) 18 (274) 53	
CALIFORNIA																							
WESTMORLAND																							
3	MIO		31	35	1.09	43	48	89	24	6.4	2.2	0	2	4.7	106	35	6.0	4.5	100	80	18	(60) 13 (238) 52	

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.



Table 4--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification &				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Poten- tial			
Grade	Stple	2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx				
No	Name & Code	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No			
WEST																							
WEST TEXAS																							
PECOS																							
2 LM	51	35	1.11	42	36	85	24	310	5.6	4.1	2	3	9.8	103	35	5.7	4.6	100	70	29	19	1/	
												*	17.6	125	44	6.4	5.2	110	90	13	9	(320)	

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

\* Comber Waste and Combed Yarn Data

Table 5.--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns										
Grade		Stple	Array Length		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imperfect's Neps/M Yards				
No	Name & Code		UQL	CV		Zero	1/8" Gage			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	
32s																								
WEST AREA																								
ARIZONA																								
1	5	46	1.51	34	38	105	34	PIMA S-5	7.3	4.2	5	6	10.2	14.5	100 PERCENT	64	35	6.0	5.0	120	120	2	1/ (46)	1 (182)
TONOPAH																								
2	4	46	1.47	32	38	102	37	PIMA S-5	6.6	3.1	4	4	6.8	13.8	100 PERCENT	68	37	5.7	4.9	110	120	1	(36)	1 (134)
WENDEN																								
2	4	46	1.50	33	40	103	36	PIMA S-5	6.7	4.2	4	4	7.2	15.2	99 PERCENT	66	36	5.6	4.8	120	120	2	(38)	1 (98)
WEST TEXAS																								
EL PASO																								
2	4	46	1.56	33	35	100	36	PIMA S-5	6.9	3.1	4	5	7.7	14.9	100 PERCENT	64	34	6.0	5.3	110	110	1	(40)	1 (150)

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.